

IN THE CLAIMS

1. (currently amended): A method of processing seaweed which comprises the following steps:

- (i) treating seaweed with an alcohol having one to six carbon atoms to form an alcoholic fraction and an insoluble first seaweed residue;
- (ii) separating the alcoholic fraction;
- (iii) removing the alcohol from the alcoholic fraction to form a concentrate comprising biologically active low molecular weight compounds;
- (iv) extracting the first seaweed residue with an aqueous solution at a pH of less than about 6 to form an aqueous first extract and an insoluble second seaweed residue;
- (v) optionally concentrating the first extract; and
- (vi) adjusting the pH of the resulting first extract (iv) or the concentrated extract of (v) to a value in the range of about 5 to about 8 to obtain a first polysaccharide fraction comprising a mixture of laminaran and fucoidan;
- (vii) extracting the second seaweed residue with water at a temperature of 40 to 100°C to form an aqueous second extract and an insoluble third seaweed residue;
- (viii) concentrating the second extract; and drying the concentrate to obtain a second polysaccharide fraction comprising a mixture of laminaran, fucoidan, and polymannuronic acid; and
- (ix) acidifying the second polysaccharide fraction to a pH not higher than 2.5 to precipitate polymannuronic acid; and separating the polymannuronic acid.

2. (currently amended): [A] The method as claimed in claim 1, further comprising treating the first polysaccharide fraction with ethanol to sequentially precipitate fucoidan first and then laminaran and separating the fucoidan and laminaran.

3. – 5. (canceled)

6. (currently amended): [A] The method as claimed in claim 5_1, further comprising dissolving the precipitate in an alkaline solution and precipitating a salt of polymannuronic acid with ethanol.

7. (currently amended): [A] The method as claimed in claim 6, further comprising: neutralizing the supernatant after precipitation; and precipitating the neutralized supernatant with ethanol to form a second third polysaccharide fraction comprising fucoidan and laminaran.
8. (currently amended): [A] The method as claimed in claim 7, further comprising treating the third seaweed residue of (vii) with an alkali to form a third extract.
9. (currently amended): [A] The method as claimed in claim 8, further comprising concentrating and neutralizing the third extract and precipitating with ethanol to obtain a third further polysaccharide fraction comprising a salt of alginic acid.
10. (currently amended): [A] The method as claimed in claim 9, wherein the seaweed is a brown seaweed.
11. (currently amended): [A] The method as claimed in claim 10, wherein the seaweed is from a species selected from the group consisting of *Laminaria cichorioides*, *Laminaria japonica*, *Alaria marginata*, *Alaria fistulosa*, *Fucus evanescens* and *Undaria pinnatifida*.
12. (currently amended): [A] The method as claimed in claim 11, wherein the seaweed is fresh or frozen.
13. (currently amended): [A] The method as claimed in claim 12, wherein in (i), the seaweed is treated with ethanol at a temperature of from about 40 to about 60°C.
14. (currently amended): [A] The method as claimed in claim 1, wherein in (iv) the first seaweed residue is extracted from hydrochloric acid at pH of about 0.5-3.0, preferably 0.5-1.5.
15. (currently amended): [A] The method as claimed in claim 3 1, wherein the second seaweed residue is extracted with water at pH of about 2.0-5.0, preferably 3.5-4.0.

16. (currently amended): [A] The method as claimed in claim 15, wherein one or more of the extracts are sequentially concentrated including the further step of concentrating one or more of the extracts by ultrafiltration on hollow fiber with pore size of 6-100 kDa.

17. (currently amended): [A] The method as claimed in claim 6, wherein a salt of polymannuronic acid is formed by treating the precipitate of polymannuronic acid with a solution of a salt compound selected from the group consisting of sodium hydroxide, ammonium oxalate, calcium hydroxide and magnesium hydroxide.

18. (currently amended): The method as claimed in claim 9, wherein a salt of alginic acid is formed by treating the third seaweed residue with a salt compound selected from the group consisting of sodium hydroxide, sodium bicarbonate, ammonium oxalate, calcium hydroxide and magnesium hydroxide.

19. – 20. (canceled)

21. (canceled)

22. (currently amended): [A] The method as claimed in claim 1 wherein the alcohol is ethanol and the seaweed is *Fucus evanescens*.

23. (currently amended): [A] The method as claimed in claim 17 wherein the salt is sodium hydroxide.

24. (currently amended): [A] The method as claimed in claim 18 wherein the salt is sodium bicarbonate.